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10/724,284	11/26/2003	Debargha Mukherjee	200310816-1	1159

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EXAMINER	
BATES, KEVIN T	
ART UNIT	**PAPER NUMBER**
2456	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/724,284	MUKHERJEE ET AL.	
	Examiner	Art Unit	
	KEVIN BATES	2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-19,33,34 and 37-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-19, 33-34, and 37-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

This Office Action is in response to a communication received on January 23, 2009.

Claims 1-10, 20-32, and 35-36 have been cancelled.

Claims 11, 33, and 34 are currently amended.

Claims 11-19, 33-34, and 37-44 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 11-19, 33-34, and 37-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalra (5953506) in view of Mukherjee et al. (Proposals for end-to-end Digital Item Adaptation using Structured Scalable Meta-Formats(SSM)) (Located in IDS filed March 8, 2004).

Regarding claims 11, 33, and 34, Kalra teaches a machine-implemented method, comprising:

receiving a scalable encoded bitstream comprising scalable encoded media data and values of non-media-type-specific scalability attributes corresponding to different adaption points of the scalable encoded media data (Column 18, lines 47 – 63);

obtaining receiving attributes for a destination of an outbound version of the scalable encoded bistream, wherein ones of the receiving attributes defined explicit constraints on the outbound version of the scalable encoded bitstream (Col. 15, line 45 – Col. 16, line 20);

determining values of adaptation measure from respective evaluations based on the values of the attribute variables (Col. 15, lines 1 – 14);

ascertaining a set of one or more candidate ones of the adaptation points of based on imposition of the constraints on the determined values the adaptation measures (Col. 16, lines 49 – 58);

selecting an adaptation point from the set of candidate adaption without regard to the scalable encoded media data, (Column 15, lines 51 – 54; Column 16, lines 20 – 24; lines 37-42; lines 53 – 58); and

transcoding the scalable bitstream in accordance with the selected adaptation point to produce the outbound version of the scalable encoded bitstream (Column 16, line 49 – Column 17, lines 8; Column 3, line 66 – Column 4, line 6).

Kalra does not explicitly indicate that the constraints are determined based on functions.

Mukherjee teaches that transcoders should scale media based on metadata descriptions and outbound constraints received on a per-media-stream bases, wherein the transcoder performs no actual determination about the actual contents of the bitstream format (Page 7-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 12, Kalra teaches the method of claim 11, wherein the determining comprises determining the value of at least one of the adaptation measures based at least in part on a multivariate function defined by a respective one of the receiving attributes and comprising a linear combination of products of univariate functions of ones of the scalability attribute variables (Column 17, lines 15 – 55).

Regarding claim 13, Kalra teaches the method of claim 12, wherein the ascertaining comprises comparing the at least one adaptation measure to at least one constraint function defined by a respective one of the receiving attributes (Column 16, lines 53 - 61).

Regarding claim 14, Kalra teaches the method of claim 11, wherein the ascertaining comprises comparing ones of the adaptation measures to ones of the receiving attributes limit constraints ascertaining (Column 16, lines 37 – 42; lines 53 - 61).

Regarding claim 15, Kalra teaches the method of claim 11, wherein the receiving attributes specified comprise optimization constraints ascertaining (Column 17, lines 15 – 55).

Regarding claim 16, Kalra teaches the method of claim 13, wherein the products comprise product terms and the determining comprises evaluating the multivariate function based on ones of the receiving attributes specifying at least one of:

a number of product terms in the linear combination; a number of elements in each product term; attribute codes for attributes in each product term; function codes for the univariate functions of the attribute values; and multipliers for the linear combination (Column 17, lines 15 – 55).

Regarding claim 17, Kalra teaches the method of claim 14, wherein the selecting comprises comparing ones of the adaptation measures to ones of the limit constraints specifying for at least one of one of the adaptation measures at least one of a maximum values and a minimum values supportable by the receiving destination (Column 15, lines 51 – 65).

Regarding claim 18, Kalra teaches the method of claim 15, wherein the selecting comprises selecting the adaptation point in accordance with at least one of the optimization constraints specifying at least one of a maximization and a minimization of a respective one of the adaptation measures (Column 16, lines 2 – 17).

Regarding claim 19, Kalra teaches the method of claim 11, wherein the selecting comprises determining at least one of the adaptation measures based at least in part on an evaluation of a stack function comprising operations, and variables corresponding to ones of the scalability attributes (Column 17, lines 15 – 55).

Regarding claim 37, Kalra teaches the method of claim 11.

Kalra does not explicitly indicate wherein the scalable encoded bitstream additionally comprises description metadata specifying a hierarchical model of the bitstream, and the transcoding further comprises adapting the description metadata to represent the structure of the outbound version of the scalable encoded bitstream.

Mukherjee teaches wherein the scalable encoded bitstream additionally comprises description metadata specifying a hierarchical model of the bitstream, and the transcoding further comprises adapting the description metadata to represent the structure of the outbound version of the scalable encoded bitstream (Page 17 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 38, Kalra teaches the method of claim 11.

Kalra does not explicitly indicate wherein the scalable encoded bitstream specifies combination variables in terms of respective ordered lists of ones of numeric constants, variables, arguments, and operators; and further comprising evaluating each of the combination variables, wherein the evaluating comprising pushing the respective ordered list onto a respective expression stack.

Mukherjee teaches wherein the scalable encoded bitstream specifies combination variables in terms of respective ordered lists of ones of numeric constants, variables, arguments, and operators; and further comprising evaluating each of the combination variables, wherein the evaluating comprising pushing the respective ordered list onto a respective expression stack (Page 17 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 39, Kalra teaches the method of claim 38.

Kalra does not explicitly indicate wherein the pushing comprises pushing each constant into the respective expression stack, and the pushing of each constant comprises pushing a real numeric element corresponding to the constant into the respective expression stack.

Mukherjee teaches wherein the pushing comprises pushing each constant into the respective expression stack, and the pushing of each constant comprises pushing a real numeric element corresponding to the constant into the respective expression stack (Page 17 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 40, Kalra teaches the method of claim 38.

Kalra does not explicitly indicate wherein the pushing comprises pushing each variable into the respective expression stack, and the pushing of each variable comprises determining a numeric value of the variable for a set of adaptation points and pushing the determining numeric value into the respective expression stack.

Mukherjee wherein the pushing comprises pushing each variable into the respective expression stack, and the pushing of each variable comprises determining a numeric value of the variable for a set of adaptation points and pushing the determining numeric value into the respective expression stack (Page 17 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 41, Kalra teaches the method of claim 38.

Kalra does not explicitly indicate wherein the pushing comprises pushing one or more unary operators into the respective expression stack, and in response to pushing each unary operator into the respective expression stack, popping the unary operator and a successive top numeric stack element out of the respective expression stack, determining a result from the popped unary operator and numeric stack element, and pushing the result into the respective expression stack.

Mukherjee teaches indicate wherein the pushing comprises pushing one or more unary operators into the respective expression stack, and in response to pushing each unary operator into the respective expression stack, popping the unary operator and a successive top numeric stack element out of the respective expression stack, determining a result from the popped unary operator and numeric stack element, and pushing the result into the respective expression stack (Page 17 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 42, Kalra teaches the method of claim 38.

Kalra teaches wherein the pushing comprises pushing one or more binary operators in the respective expression stack, and in response to pushing each binary

operator into the respective expression stack, popping the binary operator and two successive top numeric stack elements out of the respective expression stack, determining a result from the popped binary operator and the two numeric stack elements, and pushing the result into the respective expression stack.

Mukherjee teaches wherein the pushing comprises pushing one or more binary operators in the respective expression stack, and in response to pushing each binary operator into the respective expression stack, popping the binary operator and two successive top numeric stack elements out of the respective expression stack, determining a result from the popped binary operator and the two numeric stack elements, and pushing the result into the respective expression stack (Page 17 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 43, Kalra teaches the method of claim 38.

Kalra teaches further comprising calling each of the combination variables specifying a number of arguments, and in response to each calling of a respective one of the combination variables, serially popping the specified number of top elements from the respective expression stack, and determining a value of the combination variable from the popped elements.

Mukherjee teaches a method comprising calling each of the combination variables specifying a number of arguments, and in response to each calling of a respective one of the combination variables, serially popping the specified number of

top elements from the respective expression stack, and determining a value of the combination variable from the popped elements (Page 17 – 21).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the constraints be programmed by the media stream creator to allow a wide variety of stream formats to be processed by the transcoders.

Regarding claim 44, Kaltra teaches the method of claim 11, wherein tile receiving comprises receiving the scalable encoded bitstream from at least one remote network node, the obtaining comprises receiving the receiving attributes from at least one remote network node, and the scalable encoded bitstream and the receiving attributes are received from different from respective network nodes (Col. 15, line 45 – Col. 16, line 20, the attributes are received from the client).

Response to Arguments

Applicant's arguments filed January 23, 2009 have been fully considered but they are not persuasive.

The applicant argues that the reference Kalra does not indicate teach (a) non-media-type-specific scalability attribute variables, (b) explicit constraints on the outbound version of the scalable encoded bitstream in terms of respective functions of ones of the scalability attribute values or (c) determining adaptation measures based on the values of the ones of the scalability attribute variables. *See* applicant's remarks filed September 16, 2008, pg 1-2.

(a) The applicant defines non-media-type-specific scalability attributes as attributes common to all media types, and gives examples such as display resolution, size of the bitstream, processing power, etc. *See* Specification, pg 12. Kalra teaches transmitting a media stream with adaptive points which are transmitted with the header information of the media stream. See Col. 18, lines 47- 63. Kalra's header information is better shown in Fig. 7C, and includes concepts such as screen size (element 144A). Thus it is clear Kalra teaches transmitting variables in the header information of a media stream that contains some data that is common to all media types.

(b) As made clear by the rejection, Kalra is being relied upon for teaching of adapting the media stream based on the adaptation points of the media stream and the constraints on the client. *See* Kalra, Col. 15, line 1 – Col. 16, line 58. The examiner admits and does not rely on Kalra to disclose any function being applied to enforce the constraints. Mukherjee teaches the idea of applying a function to the meta-data of the media stream and determing explicit constraints. *See* Mukherjee, pg 7-10.

(c) As previously mentioned, Kalra is not being relied upon for teaching to show the application of a function.

The applicant further argues that the office action does not apply Mukherjee to show these limitations are being taught. See applicant's remarks filed January 23, 2009, pg 9.

The examiner disagrees; as shown in the mapping to claims 1, 33, and 34, Kalra teaches the idea of having the concept of having adaptation points or attributes, and scaling the media at those points based on the received constraints of the client. The

applicant is attempting to argue the references separately without considering the combination between the two. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Mukherjee is teaching an improvement on applying the scaling of the media as taught in pg 7-10, which includes an improves way of adapting the stream to the clients constraints using more of an XML based function. The combination of Kalra and Mukherjee will improve the adaptation of the media by applying Mukherjee's functional analysis to the attributes of the media stream and constraints of the client as taught in Kalra.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN BATES whose telephone number is (571) 272-3980. The examiner can normally be reached on 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin Bates/
Primary Examiner, Art Unit 2456